

What is Claimed:

1. A flexible, bioactive glass mesh comprising interwoven bioactive glass fibers coated with a resorbable polymer.
2. The mesh of claim 1 wherein said mesh comprises a porosity of between about 25% and 95%.
3. The mesh of claim 1 wherein said glass fibers are coated with a polylactic acid polymer or poly-glycolic acid polymer or both or their copolymers.
4. A flexible, bioactive mesh comprising glass fibers and first resorbable polymer fibers wherein said glass fibers are interwoven with said first resorbable polymer fibers.
5. The mesh of claim 4 wherein said glass fibers are woven perpendicularly to said first resorbable polymer fibers.
6. The mesh of claim 4 wherein said glass fibers and a first portion of said first resorbable polymer fibers are woven perpendicularly to a second portion of said first resorbable polymer fibers.
7. The mesh of claim 4 wherein the glass fibers are coated with a second resorbable polymer.
8. A flexible, bioactive scaffold comprising a plurality of bioactive meshes wherein said meshes comprise interwoven bioactive glass fibers coated with a resorbable polymer.
9. The scaffold of claim 8 wherein said plurality of bioactive meshes are laminated.
10. The scaffold of claim 8 wherein said plurality of bioactive meshes are stitched together.
11. A flexible, bioactive glass scaffold comprising a cartilage region wherein said cartilage region comprises a first bioactive mesh.

12. The scaffold of claim 11 further comprising a bone region wherein said bone region comprises a second bioactive mesh.

13. The scaffold of claim 11 wherein said first bioactive mesh comprises a porosity of between about 40% and about 95%.

14. The scaffold of claim 12 wherein said first bioactive mesh comprises a porosity of between about 40% and about 95% and said second bioactive mesh comprises a porosity of between about 25% and 80%.

15. A flexible, bioactive glass scaffold comprising a bone region wherein said bone region comprises a bioactive mesh.

16. The scaffold of claim 15 wherein said bioactive mesh comprises a porosity of between about 25% and 80%.

17. A flexible, bioactive glass scaffold comprising a non-calcified tissue region wherein said non-calcified tissue region comprises a bioactive mesh.

18. The scaffold of claim 17 wherein said bioactive mesh comprises a porosity of between about 25% and 95%.

19. A method of making a flexible , bioactive glass scaffold comprising:
pulling bioactive glass fibers;
winding said fibers;
coating said fibers with a resorbable polymer to form bundles; and
creating a biaxial weave with said bundles.

20. The method of claim 19 further comprising layering a plurality of biaxial weaves to create a three-dimensional weave.

21. The method of claim 20 wherein said plurality of biaxial weaves comprises biaxial weaves having differing porosities thereby creating a porosity gradient.

22. A method of making a flexible , bioactive glass scaffold comprising:

pulling bioactive glass fibers;
winding said fibers;
forming said fibers into bundles;
coating said bundles with a resorbable polymer; and
creating a biaxial weave with said bundles.

23. The method of claim 22 further comprising layering a plurality of biaxial weaves to create a three-dimensional weave.

24. The method of claim 23 wherein said plurality of biaxial weaves comprises biaxial weaves having differing porosities thereby creating a porosity gradient.

25. A method of engineering tissue in vitro comprising:
creating a biaxial weave comprising interwoven glass fibers;
creating a flexible bioactive glass scaffold comprising said glass fibers;
seeding fibroblasts onto said glass scaffold; and
incubating said fibroblasts.

26. A method of engineering tissue in vitro comprising:
creating a biaxial weave comprising interwoven glass fibers;
creating a flexible bioactive glass scaffold comprising said glass fibers;
seeding chondroblasts onto said glass scaffold; and
incubating said chondroblasts.

27. A method of treating a cartilage lesion in a mammal comprising:
providing a flexible, bioactive glass scaffold;
seeding chondrocyte-like cells onto said glass scaffold; and
implanting said glass scaffold into said mammal.